Evidence: What the U.S. Research Shows about Worker Ownership

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What does empirical research show about worker ownership? The averages show that the key indicator of economic performance, productivity, and many other measures related to firm performance are higher for firms that operate with profit-sharing and employee stock ownership than for otherwise comparable firms that do not follow those practices. The averages also show that workers in firms with shares and participatory work relations have higher compensation, stay on the job longer, and offer more suggestions for improvement than workers in other firms.

Starting Points

Several researchers, including the authors, have reviewed this work.[1] In 1995 Christopher Doucouliagos undertook a meta-statistic analysis of the evidence. Metastatistics is a technique widely used in medical science to put together results from many disparate studies to assess the magnitude and significance of coefficients from those studies in one fell swoop. It combines estimates from individual studies from different data sets, samples of different size, and subject to different biases or data imperfections, into a single estimate covering all studies. The notion is that the imperfections across studies are random so that averaging gives a more accurate estimate of reality.

[1] This chapter is adopted from "Evidence" in The Citizen's Share, the authors' Yale University Press book (2013)

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The scholars who have reviewed many studies plus newer studies not covered in the reviews—over 100 studies total--find that firms with share arrangements average better outcomes than otherwise comparable firms without share arrangements. The magnitude of effects is usually on the order of 2 percent to 5 percent. Meaningful profit sharing generally has larger effects on output than employee stock ownership. Combinations of programs–employee stock ownership and profit-sharing or a stock purchase plan and profit-sharing–have larger effects on output than individual programs by themselves.

To turn to specific studies, there are five important studies of the effects of share approaches on outcomes outlined in Appendix I. The British government sponsored the first study, arguably the best existing study that uses standard production function methodology. The General Accountability Office (GAO) of the U.S. Congress sponsored the second study. Both of the governments wanted to know whether policies that encouraged firms to introduce share approaches in their respective countries improved the productivity of firms, as proponents of the policies had predicted when the legislation was debated. Government sponsorship gave researchers access to financial and production information on firms that was not in the public domain.

The study commissioned by the British Government's Treasury department examined whether programs that gave firms tax incentives to introduce individual stock ownership, profit-sharing, and employee stock options affected the economic performance of those firms. Because they were the government they had access to the private financial records of the companies. The quality of the data and number of firms covered "made the study as close as we could imagine to giving a definitive analysis of tax-advantaged modes of shared capitalism on productivity". The analysis covered a sufficiently large proportion of the United Kingdom's economy to suggest that broad-based employee ownership improved performance economy-wide.[2] A parallel study of publicly available information of corporations with broad-based capitalism in the U.K. by Alex Bryson of the London School of Economics and Richard Freeman gave comparable results and found that the effects were greatly influenced by management giving workers greater autonomy in decision-making.[3]

The General Accounting Office study examined 414 firms that set up Employee Stock Ownership Plans in 1976-1979 when ESOPs were just getting off the ground. The research design matched each ESOP firm with a similarly sized non-ESOP firm in the same industry. Again, the government had access to private financial information of the companies. This study found that a combination of employee stock ownership with a supportive corporate culture raised productivity whereas ESOPs by themselves without a supportive culture had no statistically significant effect on output.[4]

The third study, by Joseph Blasi and Douglas Kruse, followed the design of the General Accounting Office study and looked at 300 privately-held firms that set up ESOPs between 1988 and 1994 and compared each ESOP firm to similar companies of the same size in the same industry, but without an ESOP. It found that the ESOP firms had significantly higher sales growth and higher sales per worker and were more likely to have survived through 1999 than matching firms without ESOPs.[5]

The fourth study was a field experiment in which researchers were allowed to randomly assign profit sharing to several stores, helping overcome concerns that other factors could be responsible for any changes in performance. The stores where profit sharing was established had increases in productivity and profitability, and decreased turnover, relative to a group of stores that were not assigned profit sharing.[6]

The last study differs from the others by relying on management reports on quality of output, financial performance, and worker turnover rather than on financial and production data. It gives a similar picture: firms do better when they combine a participatory company culture with profit sharing and employee stock ownership.[7]

Finding a positive relation between broad-based capitalism approaches such as employee stock ownership and profit sharing and firm output across many studies shows that something real is going on with corporations that adopt profit-sharing or employee stock ownership. To get a better sense of what that real something was, in 2000 we initiated the Shared Capitalism Research Project at the National Bureau of Economic Research in Cambridge, Massachusetts[8]. In contrast to the studies just discussed, which obtained information from companies about their performance as firms, we sought information from workers about what was happening at their workplaces.

The NBER Shared Capitalism Study

Our study surveyed over 40,000 employees in 14 corporations. The companies included large multinationals traded on major U.S. stock markets, important high technology innovators large and small, medium-sized corporations and smaller factories with ESOPs (Employee Stock Ownership Plans) and financial service firms and other service-oriented companies spread across just over three hundred workplaces around the country and in their foreign divisions.

Our initial plan was to pair firms that had profit sharing and employee stock ownership with their closest competitors who paid workers solely with wages or salaries per unit of time, but this plan did not pan out. Fourteen firms with some form of broad-based capitalism agreed to participate in the study but their competitors were unwilling to participate. We feared this would not give us enough contrast to reach firm conclusions about broad-based capitalism. To use the medical science analogy we had firms that were trying the medicine but did not have evidence on the control firms without the medicine.

A Control Group for the Study

We recognized that to the extent that broad-based capitalist arrangements improved outcomes, the absence of firms without such programs would likely bias downward estimates of those impacts.[9] While it is always desirable to have a representative sample, second best is to have a sample biased in a given direction since that means that if the results are in that direction, they understate the effect and thus provide a lower bound in what the relevant policy accomplishes. We obtained information from the U.S. Government's General Social Survey national survey on workers in firms that had no employee stock ownership or profit sharing in order to obtain a valid control group. The survey measures can be found in our earlier book Shared Capitalism at Work.[10].

What We Found?

The first finding from the worker surveys in the NBER Shared Capitalism study was that shares and work practices varied widely inside and across these 14 companies. We gave each worker a score based on how much ownership he or she had in their company and how much he or she shared in profits and stock options. The scores varied substantially among workers. Some had a large ownership stake. Some had little. Some were in establishments with a strong gain-sharing or profit-sharing programs. Others were not. We then compared workers who had different shared capitalism scores but who were similar in their occupation, their fixed wages, supervisory responsibilities, tenure with the company, gender, age, disability, and so forth. Sometimes we analyzed how economic outcomes varied among workers within the same company. Sometimes we analyzed how economic outcomes varied among workplaces.

While we had too few companies in the NBER study to compare companies, as noted, we used the General Social Survey sample of workers, who are chosen at random from the country as a whole and thus likely to represent single firms, to compare workers in companies with and without broad-based capitalism. We found that workers with higher shared capitalism scores, that is, the combination of worker ownership and profit sharing, were more committed to their employer along a variety of dimensions than those with lower scores and that these workers were better off in a host of important aspects of their work lives. In particular, workers with greater property in corporations in firms are more likely to stay with the company, are more loyal, are more willing to work harder, make more suggestions, and have better fixed pay and working conditions.

More Likely to Stay With Their Firm

Management in most firms seeks to lower the rate of turnover. The reason is that recruiting, training, and integrating new employees into a work force costs money, time, and effort.[11] Our measure of turnover was whether workers intended to look for a new job – a strong predictor of actual future turnover behavior. In the National Bureau for Economic Research study, nine percent of workers with high levels of profit sharing, employee stock ownership, or stock options reported that they were likely to look for a new job compared to fifteen percent of employees with low levels of shared capitalist compensation–a difference of six percentage points in the likelihood of staying. Among individual forms of shares, profit or gain sharing was associated with the lowest turnover. But the combination with employee stock ownership had an even greater impact in reducing turnover. [12] To see if this result fit the nation we examined responses to an similar question on the General Social Survey and found that fifteen percent of workers with profit-sharing, stock options, or employee ownership were likely to leave their firm compared to a fifth of workers without any form of broad-based capitalism–a difference of five percentage points.

Have Greater Loyalty and Pride Working For the Firm

Fifty-eight percent of workers on the National Bureau for Economic Research study with a high level of shared capitalism reported great loyalty to the firm compared to forty-six percent of workers with low amounts of such shares. The national General Social Survey asked a comparable question about whether workers were proud to work for an employer. Forty-four percent of workers with a high level of shared capitalism reported a high level of pride compared to twenty nine percent of workers without employee stock ownership or profit or gain sharing. Workers with profit or gain sharing expressed the highest loyalty while those with employee stock ownership and stock options had somewhat more modest increases in loyalty that still exceeded that of workers without these forms of shares. Workers with the combination of the different forms, namely, employee stock ownership and profit shares, showed the greatest loyalty to their firm and greatest pride in working for it.

Express Greater Willingness to Work Hard

To obtain a measure of the work effort that employees give to their firm in the NBER study of 14 companies we asked: To what extent do you agree or disagree with this statement: I am willing to work harder than I have to in order to help the company I work for succeed. The proportion who strongly agreed was 36 percent for workers with high levels of broad-based capitalism compared to 30 percent for workers with no shared capitalism.[13] Workers with profit sharing and gain sharing were at the top of the willingness to work hard ladder whereas those who had just broad-based employee stock ownership and stock options did not differ from other workers. Remember that we are only comparing workers with stock shares versus profit shares without, for the moment in this discussion, taking into consideration the corporate culture of their companies. Employee stock ownership, as many other studies done over the last forty years indicate, works mainly with a supportive corporate culture and the types and approach employee ownership matter a lot.

Make More Suggestions

We asked workers in the NBER study how often they made suggestions to their firm and found that among those with some form of broad-based capitalism, 26 percent made a suggestion at least once a month, compared to only 18 percent among workers without shares. Employee stock ownership had a larger impact than profit-sharing on making suggestions but the most effective practice, here as elsewhere, is to combine employee stock ownership and profit sharing with supportive work practices.[14] Ownership gives workers a capital stake in the company. Profit-sharing gives them short-term capital income. Employee involvement programs of diverse sorts such as worker town meetings, open door policies, self-directed work teams and worker problem-solving committees, encourage workers to participate in decisions. Workers in firms with employee stock ownership and profit sharing and supportive work practices not only make more suggestions than workers in other firms but they also report that management was more likely to heed their suggestions than did workers in other firms. Another U.S. study found similar results. 15

One large company in the NBER project especially interested in innovation asked us to add questions to our survey of their corporation to find out whether their workers perceived a culture of innovation, or not, at their workplace. The responses to these questions showed that workers who had shares, a cooperative culture, and mutual monitoring were most likely to view the firm's culture as positively inclined toward innovation. One has to look beyond measurements of “effort” in order to really understand broad-based capitalism in the new workplaces today because a lot of the success of work teams in the current post-industrial economy has to do more with ingenuity and innovation rather than sheer physical or mental effort. Citizens across the nation do a lot less heavy lifting and pushing and pulling and shoveling and carrying and putting things on and taking things off than they did fifty years ago. Much of this effort is now done by machines so what happens in teams and between workers and with workers and customers is far more important. New research by Dan Weltman indicates that the initial effect of employee share ownership on individual workers appears to kick in at very low thresholds in influencing the frequency with which workers make suggestions and whether they ideas for innovations rather than slight improvements. The effect on their overall company loyalty and their willingness to work on innovations appears to increase as share ownership expands.[16]

Have Better Wages and Work Conditions

Do workers gain from a property stake in their firm? The question may strike some readers as a clumsy set-up to an obvious answer. However, some critics of employee shares believe that when workers have a stake in ownership, this stake comes at the cost of lower wages or other benefits so that on a net basis, workers may not be better off with profit-sharing or employee ownership or otherwise. It is entirely possible that this is how shares could end up. In fact, some managers believe in what they call "pay at risk" by putting the worker under the maximum possible pressure to earn even fair wages. [17] Our evidence dispels this criticism and supports the "obvious answer."

There is strong evidence that employee stock ownership and profit sharing have meaningful impacts on workers' wealth. The NBER study found that workers with profit-sharing or employee stock ownership are higher paid and have more benefits than other workers.[18] This means that the substantial profit sharing and gain sharing and ownership stakes for the typical worker in these plans tend to come on top of (not in place of) fair fixed wages and benefits, as many other studies have found.[19] These workers also obtain more training and have greater job security than other workers, and enjoy better work conditions with greater participation in decisions, better treatment by the employer, and less supervision.[20] These better conditions are consistently linked to profit-sharing, although some of the conditions are also better for workers with gain sharing, stock options, and employee stock ownership. Being eligible for profit sharing or being an employee-owner by itself is associated with better wages and work conditions. But the size of a profit or gain share, the value of the employer stock ownership stake, and the size of the potential stock option profit are also associated with much better conditions for workers.

What About Those Free Riders?

The classic free rider objection to broad-based capitalism–that profit-sharing or employee stock ownership in a large group cannot succeed because each individual has an incentive to shirk. Since all workers presumably know that everyone thinks this way, the gist of this criticism is that ownership stakes and profit shares will fail to motivate anyone to work hard. One potentially important channel for overcoming the free rider problem is through worker co-monitoring–the process by which workers with an ownership stake and a profit share take on the responsibility of assuring that fellow workers do their part at work places. Another way to think of it is mutual support, encouragement, coaching, or that good old-fashioned word, help. While the notion that co-monitoring can reduce free-rider behavior is an old one in analysis of team production, until the National Bureau for Economic Research's Shared Capitalism Project no major survey had documented co-monitoring behavior, linked it to shares and the structure of work, and examined how it affected employee performance at workplaces.

We used both the NBER and the GSS survey to study this issue. On the U.S. General Social Survey of workers across the United States, seventy-seven percent of workers said that they too could observe their co-workers' performance. On the National Bureau for Economic Research's fourteen firm survey, sixty-two percent of workers said that they can figure out what their fellow worker is doing. Given that most workers could observe the effort of co-workers, we next asked how likely it was that they would take action involving "a fellow employee not working as hard or well as he or she should"–anti-shirking behavior, supporting the fellow worker. Workers varied a lot in their answers to this question. Some said it was very likely they would talk directly to the employer about their fellow shirking worker. Some said they would speak to a supervisor or manager. And some said it was very likely they would do nothing. The size of an employees' workplace was an important factor in these differences. In the NBER survey a workplace with less than 10 employees, 44 percent of workers said they would definitely respond in some fashion to seeing a fellow employee shirk whereas in a workplace with over 100 workers, only 35 percent said they would respond. Since getting a shirker to shape up has smaller benefits to other workers in a larger workplace, this is free-rider behavior at work in monitoring free riding!

What we discovered was that workers with employee stock ownership or profit-sharing or gain-sharing are more likely to step forward and take action and support the shirking fellow employee more than other workers without shares. In the 14 firm survey of corporations with some form of broad-based capitalism, the intensity of profit-sharing and gain-sharing was the most important factor in whether workers would take action for cash profit sharing. For shares of stock, workers took action against shirkers just as a result of owning any company stock or holding any employee stock options. In the General Social Survey, where some workers are in firms with no programs at all, the presence of profit-sharing and gain-sharing and employee stock ownership was the most important determinant of anti-shirking behavior. But it was the combination of the different share approaches with personnel practices that create an ownership culture that induced the most co-monitoring behavior: being part of a team, having a high participation in decisions, being treated with respect by their supervisor, having formal training and job security, and being paid relatively well for their job. By contrast, when workers were paid large <u>individual</u> bonuses they were less willing to get involved with a shirking co-worker. If you and I are competing for a bonus, why should I help you perform better?–the worse you do, the more likely I get the bonus. It is the team reward that generates cooperation and the willingness to take time and effort to press other workers to produce up to speed.

We added questions to the NBER survey to find out if the workers had ever actually seen a fellow employees not working as hard as they should, and what the employee had in fact done. Thirty five percent of the workers said that the employee who was not working well resented it. But forty five percent said that the other employee appreciated the action and forty percent said the supervisor appreciated it. Over one third said the employees' performance improved but nearly the same proportion said the employees' performance did not improve, and one third did not know.

The Nation's Best Employers

Every year the Great Place to Work Institute reviews the applications of major corporations who seek a place on the list of "100 Best Companies to Work for in America" that <u>Fortune Magazine</u> presents with great fanfare. Because being named one of the hundred best is an honor that can attract additional and better job applicants and help retain and spur current employees and bring companies lots of acclaim and attention, every year about 400 of the largest and most successful corporations apply for consideration and compete. The shares of half of the corporations applying are traded on the New York Stock Exchange and the NASDAQ, where they represent twenty percent of the market value of the public stock market and ten percent of employment and sales of all stock market companies. Because of this, any study of shares among the applicants is a study of a major slice of America's corporations and the American economy. This study, entitled, "Do Broad-based Employee Ownership, Profit Sharing, and Stock Options Help the Best Firms Do Even Better?" is forthcoming in the *British Journal of Industrial Relations* in 2016.

To determine the 100 Best Companies to Work For, the Great Place to Work Institute queries managements about their corporate culture and practices and obtains data on turnover and other aspects of work practices and corporate culture. The Institute then surveys a random group of each company's workers and asks them how they are paid–with cash profit sharing, employee stock ownership, and broad-based stock options–and their attitude towards the company and behavior at work. Between 2006 and 2008 over 1300 corporations applied for the 100 Best Companies to Work for in America competition. Over 300,000 of their workers filled out the Great Place To Work Institute survey that ultimately determines whether a corporation makes the 100 Best list and where it places on the list. The Institute uses the survey responses to develop a comprehensive indicator of corporate culture called the Trust Index that measures workers' view of the credibility, respect, fairness, pride and camaraderie of their company.

The Great Place to Work Institute gave us limited access to their data under strict confidentiality procedures to examine the relation between employee stock ownership and profit sharing and work practices and the performance of applicant firms. We sought to determine whether firms that gave their workers some property stake were disproportionately represented among applicants and whether firms with greater degrees of shares and work practices performed better than their peer firms with weaker or no such programs.

Since firms with exceptional human resource policies and corporate cultures self select into the applicant pool, comparisons of outcomes within this group are likely biased against finding any effects for broad-based capitalism approaches such as employee stock ownership and profit sharing. A firm that believed its practices merited recognition as among the 100 Best and that did not have profit-sharing or employee ownership presumably had other policies to reward and motivate workers (an especially well-designed promotion system? generous worker friendly-benefits?) that would compensate for the absence of those programs.   One can presume that many applicants were trying very hard to be "the best" corporations.

It is interesting that a large proportion of the applicants for the 100 Best Company to Work For competition had some form of employee stock ownership or profit sharing for their workers. Eighteen percent had ESOPs. Eighteen percent had cash profit or gain sharing plans. Twenty-two percent had deferred profit sharing plans. The average ESOP in the sample owned about 17 percent of company stock. One tenth of the companies were even majority worker-owned. One in six companies granted stock options to a majority of their workers. Another 17 percent of the companies granted stock options to between a quarter and half of all the corporation's workers. The average profit sharing or gain sharing plan provided a worker a 7 percent bonus on top of their pay.

We discovered that corporations with more extensive employee ownership and profit sharing had higher scores on the Trust Index. The workers in these corporations rated their company as more credible, respectful of workers interests, fairer, and as providing greater participation in decisions than workers than other firms. ESOPs and profit sharing plans where profits added a lot to annual salary topped the list in the Trust Index. Workers with stock options did not differ much on the Trust Index from workers without those options. Corporations with more extensive broad-based capitalism had reduced voluntary turnover, increased employees' intentions to stay with the firm, and higher return on equity for the firm. Corporations that combined shares with participative work practices and a supportive corporate culture had the biggest payoff in reduced turnover and higher return on equity. Finding these effects in the non-representative "100 Best Companies to Work For" sample strengthens the likelihood that the policies have a causal impact on employee well-being and firm performance.[21]

The Importance of Participative Ownership Culture

Every worker has the discretion to try harder, work harder, think more creatively, cooperate with fellow workers or choose not to cooperate. Management cannot get into workers' minds and tap into this discretionary effort. This is a matter of free choice. It is either given or not given by the individual person through a complex set of perceptions, motivations, and judgments. Corporations can observe activity but corporate supervisors cannot control what goes on inside the head of the independent person who can grant discretionary effort or problem-solving capacity or not out of their own mind. In the post-industrial workplace much of what the workers has to do is not a matter of mere effort or extra time. If a worker has ownership of the company and finds that the corporate culture throws up barriers to his or her discretion to try harder through physical or mental or emotional or social effort, then it is difficult to imagine how broad-based capitalism can be tied to better performance.

The statistical evidence that firms in which workers have a property stake in their firm are more productive, induce more worker effort and responsibility, spur workers to innovate more, and produce diverse other benefits for workers and the corporation shows that this is a viable organizational form of capitalism. It pays off, at least for those firms and workers that choose it. It is important to recognize that most research studies show that a very thin layer of shares--a stock option or two for every bank teller in a large publicly-traded bank–is not going to make much difference. The impacts are larger when the programs are meaningful as they are in many closely-held ESOP companies and some model publicly-traded companies. But shares are not simply about workers getting more money in the pocket from an ownership or profit stake and firms benefiting with lower turnover, greater work effort, and higher production. It is also about the firm and its employees developing a culture that supports employee participation and cooperation between management and employees over the long term. The corporations and workers that do best combine shares and workplace practices in the context of a participative ownership culture. Our analysis found that giving workers more responsibility, having more teams and problem-solving groups, having a less hierarchical workplace where supervision involved more coaching than control, paying workers at or above the market rate for their fixed wages, and providing workers with greater training opportunities defined this culture.

One fascinating question is whether firms that adopt employee stock ownership or profit or gain sharing are likely to also adopt a supportive corporate culture. The answer is yes. Our national surveys show that workers in these firms report significantly more participation in solving company problems through employee involvement teams and self-directed work teams, and say they have more influence, and, in some cases, more training. Managers appear to be either increasingly inferring the better company culture or learning from each other as they compare one company to another. This is also underlined with new data on our *British Journal of Industrial Relations* study.[22]

Extending these practices to more workers and firms, and strengthening the practices in the workplaces where they exist, offers a road for normal workers to tap into the wealth embodied in corporate property.

Appendix 5.1. Five Studies of the Relation Between Shared Capitalism and Firm Outputs

Study 1: UK Treasury Sponsored Study of British firms (2007). This study obtained data from confidential tax records that identified firms that had approved profit-sharing plans, Save as You Earn plans, and company share option plans for 16,844 firms. It linked this data to company value added, employment, profits, and capital for 7,633 businesses. The study covered enough firms and years to permit the analysts to conduct a panel study of firms that entered or left the programs as well as to compare firms with and without the programs at a point in time, and to examine whether the effects differed among industries. The conclusion: "on average, across the whole sample, the effect of tax-advantaged share schemes is significant and increases productivity by 2.5% in the long run"

Study 2: General Accountability Office of the U.S. Congress (1987). This study examined 414 corporations which established Employee Stock Ownership Plans that were set up between 1976-1979 when ESOPs were just getting off the ground in the United States. The companies were mostly small and medium size businesses whose stock was not traded on a public stock market. The average company was just under ten percent owned by its workers. The study matched the ESOP firms with non-ESOP firms in the same industry and of the same size and compared outcomes three years after employee ownership started to two years before. The conclusion: By itself employee stock ownership did not change performance but the combination of employee stock ownership with a change in corporate culture was associated with an increase in productivity "fifty two percentage points higher than the change for firms that did not have such employee involvement."

Study 3: Blasi-Kruse study of ESOPs set up between 1988 and 1994. These were small businesses with about four hundred workers each. The study compared ESOPs to similarly sized businesses without broad-based employee ownership in the same industry a decade into the future. Workers in the ESOPs had a capital ownership stake of about $15,000, were five times more likely to have a traditional pension plan, were five times more likely to have a 401k plan, were four times more likely to have a profit sharing plan, and seven times more likely to have another retirement plan than workers in the non-ESOP companies. The ESOPs had significantly higher sales growth and higher sales per worker than the companies without employee ownership. The ESOP corporations survived longer and had fewer bankruptcies. By 1999 almost seventy percent of the employee ownership businesses were still in existence compared to only fifty-five percent of the non-employee ownership companies. A 2002 follow-up on all ESOPs found similar results.

Study 4. This is a field experiment based on 21 fast-food franchises owned by one firm, where researchers were allowed to randomly assign profit sharing to 3 franchises and non-financial incentives (social recognition and performance feedback) to 6 franchises, with the remaining 12 as the control group. A pre/post comparison using monthly data found increased profitability and productivity, and decreased employee turnover, in the profit-sharing franchises relative to the control group. In addition, profit sharing had a more immediate positive effect on profitability and productivity as well as a greater long-lasting effect on employee turnover relative to the non-financial incentives.

Study 5: A 2003 survey of just over a thousand establishments in the State of California done at the Goldman School of Public Policy at the University of California at Berkeley came to similar conclusions. Managers' assessments of quality, financial performance, and the turnover of workers were best when a participatory company culture was combined with profit sharing and employee stock ownership.

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See Martin L. Weitzman and Douglas L. Kruse, "Profit Sharing and Productivity," in Alan S. Blinder, ed., Paying for Productivity. Washington, D.C.: Brookings Institution, 1990: 95-141. Blasi and Kruse, 1995; Alex Bryson and Richard Freeman, Doing the Right Thing? Does Fair Share Capitalism Improve Workplace Performance? London: UK Department of Trade and Industry, Employment Relations Research Series, Number 81, 2007. The following studies reviewed research for the United Kingdom: Oxera Economic Consultancy, Tax Advantaged Employee Share Schemes: Analysis of Productivity Effects, Report 1, Productivity Measured Using Turnover. Prepared for Her Majesty's Revenue And Customs. London: Her Majesty's Revenue and Customs- HMRC, Report 33, August 2007a; Oxera Economic Consultancy, Tax Advantaged Employee Share Schemes: Analysis of Productivity Effects, Report 2, Productivity Measured Using Gross Value Added. Prepared for Her Majesty's Revenue And Customs. London: Her Majesty's Revenue and Customs- HMRC, Report 33, August 2007b; Oxera Economic Consultancy, Tax Advantaged Employee Share Schemes: Analysis of Productivity Effects, Overview. Prepared for Her Majesty's Revenue And Customs. London: Her Majesty's Revenue and Customs- HMRC, Report 33, August 2007c, and, Oxera Economic Consultancy, Tax Advantaged Employee Share Schemes: Analysis of Productivity Effects, Appendices to Report 1. Prepared for Her Majesty's Revenue And Customs. London: Her Majesty's Revenue and Customs- HMRC, Report 33, August 2007d.

2

See Oxera, Tax Advantaged Employee Share Schemes: 2007abcd. In 2010 the UK commissioned another economic consultancy to review the evidence that supported these conclusions in the Matrix report. See Matrix Knowledge Group, The Employee Ownership

Effect: A Review of the Evidence. London: Matrix Evidence, a division of Matrix Knowledge Group, 2010.

3

See Alex Bryson and Richard Freeman, "How Does Shared Capitalism Affect Economic Performance in the United Kingdom?" in Kruse, Freeman, and Blasi, Shared Capitalism at Work, 201-224.

4

See United States General Accounting Office, Employee Stock Ownership Plans: Report to the Chairman, Committee on Finance, U.S. Senate. Washington, D.C.: U.S. General Accounting Office, October 1987), Report Number GAO-PEMD-88-1.

5

See Joseph Blasi, Douglas Kruse, and Daniel Weltmann, "Firm Survival, Performance, and Employee Ownership: Comparing Privately-held ESOP and non-ESOP Firms," Advances in Economic Analysis of Participatory and Self-managed Firms. Greenwich, Connecticut: JAI Press, forthcoming 2013.

6

Peterson, Suzanne J., and Fred Luthans, "The Impact of Financial and Nonfinancial Incentives on Business-Unit Outcomes Over Time," Journal of Applied Psychology, Volume 91, Number 1(2006): 156–165.

7

This survey was designed by the University of California Berkeley Institute of Industrial Relations and conducted between May and October of 2003 of 2,806 establishments. On this

California Establishment Survey see Kruse, Freeman, and Blasi, Shared Capitalism at Work, 187-191.

8

The National Bureau of Economic Research is the world's leading nonprofit, nonpartisan economic research center. The study is Kruse, Freeman, and Blasi, *Shared Capitalism at Work*. The book can be found at: http://www.nber.org/books/krus08-1/ and is available in print and online at the University of Chicago Press and online at Google Books.

9

This assumes that the arrangements have a reasonably monotonic linear relation to outcomes.

10

See Kruse, Freeman, and Blasi, Shared Capitalism, 10-11, 24-34, and the survey measures in Appendix A, 387-401

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See turnover cost calculator at http://www.cepr.net/calculators/turnover_calc.html

12.

See Kruse, Freeman, and Blasi, Shared Capitalism at Work, 152-157.

13

This comparison adjusts for differences in demographic and job characteristics (e.g., age, sex, tenure, occupation). The numbers represent the estimated likelihood of strong agreement for an average worker in the sample.

14

See Erika E. Harden, Douglas Kruse and Joseph Blasi, "Who Has A Better Idea? Innovation, Shared Capitalism, and Human Resources Policies," in Kruse, Freeman, and Blasi, Shared Capitalism at Work, 225-256.

15

See Arindrajit Dube and Richard Freeman, "Complementarity of Shared Compensation and Decision-Making Systems: Evidence from the American Labor Market" in Kruse, Freeman, and Blasi, Shared Capitalism at Work, 167-200.

16

See Dan Weltman, Joseph Blasi, and Douglas Kruse. At What Threshhold Do Employee Shares Have A Meaningful Effect? New Brunswick: Rutgers University School of Management and Labor Relations, 2013.

17

David Handel and David Levine, "The Effect of New Work Practices on Workers," Industrial Relations, Volume 43, Number 1(January, 2004):1-41, especially 6.

18

See Kruse, Freeman, and Blasi, "Do Workers Gain by Sharing?" in Kruse, Freeman, and Blasi, Shared Capitalism at Work, 257-289.

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The most recent evidence is from the 2006 General Social Survey where 70-80 percent of a random sample of adult workers reported that they were paid at or above the market rate for their jobs if covered by profit sharing, gain sharing, employee stock ownership or if they were holding employee stock options in their firm. See Douglas Kruse and Joseph Blasi. Report on the 2006 General Social Survey on Shared Capitalism. New Brunswick, N.J.: Rutgers University School of Management and Labor Relations: Table 3. The higher pay and benefits under these plans would appear to go against the economic theory of compensating wage differentials, which predicts that workers receiving employee ownership or profit sharing will have lower regular pay, fewer benefits, and/or worse working conditions to compensate for the benefits of these plans. There were some publicized cases of workers making wage or benefit concessions in exchange for employee ownership or profit sharing in the 1980s, but these constituted a very small fraction of plan adoptions (between 4 percent and 7 percent according to a General Accounting Office survey). On this, see U.S. General Accounting Office. Employee Stock Ownership Plans: Benefits and Costs of ESOP Tax Incentives for Broadening Stock Ownership. Washington, D.C. U.S. General Accounting Office, 1986. On concession bargaining with employee stock ownership, see Joseph Blasi and Douglas Kruse, The New Owners The Mass Emergence of Employee Ownership in Public Companies and What it Means to American Business. New York: HarperCollins, 1991: 325-328. Apart from these few concessionary situations, over 20 studies find employee ownership and profit sharing are not linked to generally lower fixed pay or benefits, and are often found to exist along with higher base pay and benefits. This is found both in comparisons of matched ESOP and non-ESOP firms. On this, see P. Kardas,. A.L. Scharf, and J. Keogh, "Wealth and Income Consequences of ESOPs and Employee Ownership: A Comparative Study from Washington State," Journal of Employee Ownership Law and Finance, Volume 10, Number 4(1998): 3-52, and A. Scharf and C.M. Mackin, Census of Massachusetts Companies with Employee Stock Ownership Plans (ESOPs). Boston: Commonwealth Corporation, 2000. It is also found in pre/post comparisons of plan adoption controlling for state-level and industry-level wage changes and other company characteristics. See E. H. Kim and P. Ouimet, Employee Capitalism or Corporate Socialism: Broad-based Employee Stock Ownership. Washington, D.C. U.S. Census Bureau Center for Economic Studies, Paper Number CES-WP-09-44, 2009. ESOP companies are four times more likely than non-ESOP companies to have traditional pensions as noted in Kruse, Research Evidence on Prevalence and Effects of Employee Ownership, 2002. The pension assets per employee of ESOP companies are substantially higher than in non-ESOP companies with other types of defined contribution plans. On this, see Loren Rodgers, "Are ESOPs Good for Employees?" Pensions & Benefits Daily, Volume 100, November 1, 2010: 1-5. (The Bureau of National Affairs). For detailed reports on the original data, see Loren Rodgers and Michael Keeling, ESOPs as Retirement Benefits. Oakland, California and Washington, D.C.: National Center for Employee Ownership and The Employee Ownership Foundation, September 20, 2010, and National Center for Employee Ownership, ESOPs as Retirement Benefits–Supplemental Tables. Oakland, Ca. and Washington, D.C.: National Center for Employee Ownership and Employee Ownership Foundation, September 15, 2010. Going against the idea that the higher pay levels simply reflect higher worker quality, average base pay of individuals goes up as workers join profit sharing companies, and down as they leave them. See Douglas Kruse, "Profit -Sharing and the Demand for Low-Skill Workers," in Peter Gottschalk and Richard Freeman eds., Generating Jobs. New York: Russell Sage Foundation,1998: 105-153. Workers appear to be sharing in the average higher productivity of broad-based capitalism firms. As such, their higher total compensation may represent a compensating differential for their higher quantity and quality of work, and/or an efficiency wage that motivates and sustains high performance. See George Akerlof, "Gift Exchange and Efficiency-Wage Theory: Four Views," American

Economic Review, Volume 74, Number 2(May 1984): 79-83.

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See Kruse, Freeman, and Blasi, "Do Workers Gain by Sharing?" in Kruse, Freeman, and Blasi, Shared Capitalism at Work, 257-289.

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Douglas Kruse, Joseph Blasi, and Richard Freeman. Does Shared Capitalism Help the Best Firms Do Even Better? Cambridge: National Bureau for Economic Research, 2011, Working Paper 7745.

22

For this evidence see Kruse, Blasi, and Park, "Shared Capitalism in the U.S. Economy," in Kruse, Freeman, and Blasi, Shared Capitalism at Work, 61 ((Table 1.6).

THE END